



**Department of Energy**  
Richland Operations Office  
P.O. Box 550  
Richland, Washington 99352  
OCT 27 1995

96-PCA-015

Mr. Moses N. Jaraysi  
Unit Supervisor  
Nuclear Waste Program  
State of Washington  
Department of Ecology  
1315 West Fourth Avenue  
Kennewick, Washington 99336

Mr. Joseph J. Witczak  
Unit Supervisor  
Regulatory and Technical  
Support Unit  
Nuclear Waste Program  
State of Washington  
Department of Ecology  
P.O. Box 47600  
Olympia, Washington 98504-7600

Dear Messrs. Jaraysi and Witczak:

**PROJECTIONS OF ANTICIPATED COSTS FOR CLOSURE AND POSTCLOSURE FOR HANFORD  
FACILITY TREATMENT, STORAGE, AND/OR DISPOSAL UNITS**

Conditions II.H.1. and II.H.2. of the Hanford Facility Resource Conservation and Recovery Act (RCRA) Permit (RCRA Permit), Dangerous Waste (DW) Portion, require the annual reporting of projections of anticipated costs for closure and postclosure, including postclosure monitoring and maintenance, for treatment, storage and/or disposal (TSD) units incorporated into Parts III (Unit-Specific Conditions for Operating Units) or V (Unit-Specific Conditions for Units Undergoing Closure) of the RCRA Permit, DW Portion. The first Annual Projections of Anticipated Closure Costs (Annual Report), submitted on October 31, 1994, addressed five TSD units. This second Annual Report addresses an additional eight TSD units which have been incorporated into the RCRA Permit, DW Portion over the last year.

The organization of the Annual Report is consistent with the approach approved by Mr. Jaraysi at the Hanford Facility RCRA Permit Steering Committee Meeting held on October 3, 1995. This approach entails the reporting of projections of anticipated closure costs for the 13 TSD units incorporated into the RCRA

OCT 27 1995

Messrs. Jaraysi and Witczak  
96-PCA-015

-2-

Permit, DW Portion, in accordance with the status of a TSD unit, categorized as follows:

- Anticipated closure cost projection has been submitted for a TSD unit in a previous Annual Report; no significant change in the approach to closure has been made since that submittal and the cost projection includes an escalation factor only. These TSD units currently include the 616 Nonradioactive Dangerous Waste Storage Facility (Chapter 1, Part III, DW Portion), co-operated by Westinghouse Hanford Company (WHC), and the 305-B Storage Facility (Chapter 2, Part III, DW Portion), co-operated by Pacific Northwest Laboratory (PNL).
- Anticipated closure cost projection has been submitted for a TSD unit in a previous Annual Report; a significant enough change in the approach to closure has been made since that submittal to warrant a full cost projection revision. Currently included in this category is the 183-H Solar Evaporation Basins (Chapter 1, Part V, DW Portion), co-operated by Bechtel Hanford, Inc. (BHI).
- Clean closure certification documentation has been submitted for a TSD unit; however, administrative costs remain. These TSD units currently include the 218-E-8 Borrow Pit Demolition Site (Chapter 5, Part V, DW Portion), the 200 West Area Ash Pit Demolition Site (Chapter 6, Part V, DW Portion), the 2101-M Pond (Chapter 7, Part V, DW Portion), the Hanford Patrol Academy Demolition Site (Chapter 9, Part V, DW Portion), and the 304 Concretion Facility (Chapter 11, Part V, DW Portion). All of these TSD units are co-operated by WHC.
- Clean closure certification documentation has been submitted for a TSD unit; no additional costs remain and an update of an anticipated closure cost projection is no longer needed. These TSD units currently include the 300 Area Solvent Evaporator (Chapter 2, Part V, DW Portion), the 2727-S Nonradioactive Dangerous Waste Storage (Chapter 3, Part V, DW Portion), and the 216-B-3 Expansion Ponds (Chapter 8, Part V, DW Portion); all co-operated by WHC. An additional TSD unit co-operated by PNL, the Simulated High Level Waste Slurry Treatment and Storage (Chapter 4, Part V, DW Portion), is included in this category.
- No anticipated closure cost projection has previously been submitted for a TSD unit; a new cost projection is provided. Currently included in this category is the 105-DR Large Sodium Fire Facility (Chapter 10, Part V, DW Portion), co-operated by WHC.

The updated and new anticipated closure cost projections for the cited TSD units co-operated by PNL and WHC have been completed using the methodology of the U.S. Department of Energy, Richland Operations Office (RL) Implementing Directive RLID 5700.3, "Project Cost Estimating, Analysis, and Cost Standardization." The updated anticipated closure cost projections for

OCT 27 1995

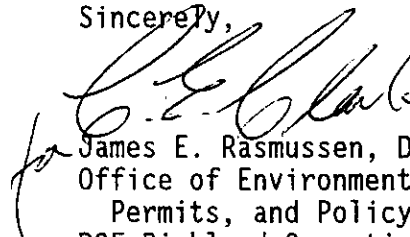
Messrs. Jaraysi and Witczak  
96-PCA-015

-3-

the cited TSD unit co-operated by BHI has been completed in accordance with the Environment Restoration Contractor's Baselines and Funds Management System Procedure and the Primavera scheduling system/Parade costing system. Each of the anticipated closure cost projections have been reviewed by BHI, PNL, and WHC for their respective TSD units.

Should you have any questions, please contact Mr. C. E. Clark, RL, on (509) 376-9333.

Sincerely,

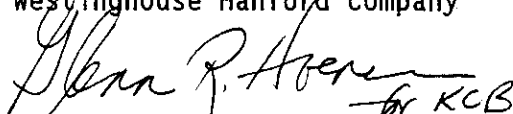


James E. Rasmussen, Director  
Office of Environmental Assurance,  
Permits, and Policy  
DOE Richland Operations Offices

EAP:EMM



William T. Dixon, Manager  
Environmental Services  
Westinghouse Hanford Company



Kenneth C. Brog, Director  
Environment, Safety, and Health  
Pacific Northwest Laboratory



Steven D. Liedle  
Vice President, Operations  
Bechtel Hanford Inc.

## Enclosure:

1. Table 1, Status of TSD Units  
in the Hanford RCRA Permit,  
DW Portion, Rev. 2.
2. Projections of Anticipated  
Closure Costs for TSD Units  
included in the RCRA Permit,  
DW Portion

cc: See page 4

Messrs. Jaraysi and Witczak  
96-PCA-015

-4-

cc w/encls:

EDMC, H6-08

J. Badden, BHI

R. Brunke, WHC

R. Cordts, Ecology

D. Duncan, EPA

R. Jim, YIN

D. Powaukee, NPT

F. Ruck III, WHC

G. Thornton, PNL

H. Tilden II, PNL

J. Wilkinson, CTUIR

cc w/o encls:

W. Dixon, WHC

J. Dunkirk, BHI

E. Flores, PNL

M. Hughes, BHI

R. Landon, BHI

G. McNair, PNL

L. Mihalik, BHI

J. Nemec, BHI

S. Price, WHC

D. Sherwood, EPA

# **CORRESPONDENCE DISTRIBUTION COVERSHEET**

<b>Author</b>	<b>Addressee</b>	<b>Correspondence No.</b>
J. E. Rasmussen, RL	M. N. Jaraysi, Ecology	Incoming 9504724
W. T. Dixon, WHC	J. J. Witczak, Ecology	Xref 9555595D
(D. B. Jensen, WHC)		

**Subject:** PROJECTIONS OF ANTICIPATED COSTS FOR CLOSURE AND POSTCLOSURE FOR  
HANFORD FACILITY TREATMENT, STORAGE, AND/OR DISPOSAL UNITS

## **INTERNAL DISTRIBUTION**

<b>Approval</b>	<b>Date</b>	<b>Name</b>	<b>Location</b>	<b>w/att</b>
		Correspondence Control	A3-01	X
		R. C. Bowman	H6-24	
		R. J. Bliss	B3-04	
		R. C. Brunke	H6-23	
		W. T. Dixon, Sr. Staff	H6-21	
		W. H. Hamilton, Jr.	T3-01	
		P. L. Hapke	T4-05	
		D. B. Jensen	H6-23	X
		E. F. Loika	N2-51	
		P. J. Mackey	B3-15	
		I. L. Metcalf	L6-26	X
		P. C. Miller	N2-57	X
		S. M. Price, Assignee	H6-23	
		R. D. Pierce	T3-04	X
		J. A. Remaize	L6-26	
		F. A. Ruck III	H6-23	X
		S. W. Scott	N2-57	
		J. M. Steffen	N1-47	
		R. E. Traister	B3-63	X
		RCRA File/BAO	H6-23	X
		DBJ/File/LB	H6-23	X

**ENCLOSURE**

Consisting of 36 pages,  
including cover page

**Table 1**  
**Status of Treatment, Storage, and/or Disposal Units (TSD)**  
**in the Hanford Resource Conservation and Recovery Act (RCRA) Permit,**  
**DW Portion, Rev. 2**

TSD Unit Name (Co-operator Name)	RCRA Permit Rev.	Previously Provided; Escalation Factor Only	Previously Provided; Full Cost Estimate Provided	Only Administrative Costs Remaining	Clean-Closed; No Estimate Needed	Not Previously Provided; full Cost Estimate Provided
616 Nonradioactive Dangerous Waste Storage Facility (WHC)	Rev. 0	X				
305-B Storage Facility (PNL)	Rev. 0	X				
183-H Solar Evaporation Basins (BHI)	Rev. 0		X			
218-E-8 Borrow Pit (WHC)	Rev. 1			X		
200 West Area Ash Pit (WHC)	Rev. 1			X		
2101-M Pond (WHC)	Rev. 1			X		
Hanford Patrol Academy Demolition Site (WHC)	Rev. 2			X		
304 Concretion (WHC)	Rev. 2			X		
300 Area Solvent Evaporator (WHC)	Rev. 0				X	
2727-S Nonradioactive Dangerous Waste Storage (WHC)	Rev. 0				X	
Simulated High Level Waste Slurry Treatment/Storage (PNL)	Rev. 1				X	
216-B-3 Expansion Ponds (WHC)	Rev. 1				X	
105-DR Large Sodium Fire Facility (WHC)	Rev. 2					X

PROJECTIONS OF ANTICIPATED COSTS FOR CLOSURE AND POSTCLOSURE  
FOR  
TREATMENT, STORAGE AND/OR DISPOSAL UNITS INCLUDED IN THE HANFORD FACILITY  
RESOURCE CONSERVATION AND RECOVERY ACT PERMIT, DANGEROUS WASTE PORTION  
DEVELOPMENT DESCRIPTION

Conditions II.H.1. and II.H.2. of the Hanford Facility Resource Conservation and Recovery Act Permit, "Dangerous Waste Portion," require the annual reporting of projections of anticipated costs for closure and postclosure, including postclosure monitoring and maintenance, for treatment, storage and/or disposal (TSD) units incorporated into Part III (Unit-Specific Conditions for Operating Units) or Part V (Unit-Specific Conditions for Units Undergoing Closure) of the Resource Conservation and Recovery Act (RCRA) Permit (RCRA Permit), Dangerous Waste (DW) (DW Portion).

Certification of the Projections of Anticipated Closure Costs for the TSD Units, in accordance with Condition I.F. of the RCRA Permit, DW Portion, is provided on Page 36.

A generic interpretative description also is provided with this Projection of Anticipated Closure Costs. A description of the general basis for the projected costs is presented in the section of this report enclosure entitled "Closure Activities."

For the following discussion, it may be helpful to refer to Table 1 of this enclosure. For ease of reference in the following text, the co-operator appears in brackets following the name of the TSD unit for which they have responsibilities; Pacific Northwest Laboratory (PNL) or Westinghouse Hanford Company (WHC). Information on each TSD unit can be found in this enclosure in order of appearance below.

Two brief projections are included in this report for the TSD units that have been incorporated into the RCRA Permit, DW Portion, during Fiscal Year (FY) 1995, for which no closing date is currently identified and for which the original strategy of pursuing clean closure has not been changed. Complete cost estimates were submitted for both TSD units in the Projection of Anticipated Costs submitted on October 31, 1994. The current update for these two units uses an escalation factor only:

- 616 Nonradioactive Dangerous Waste Storage (Part III) [WHC]; and
- 305-B Storage Facility (Part III) [PNL].

The following four TSD units are currently incorporated into the RCRA Permit and have been accepted by the Washington State Department of Ecology as clean closed. No further costs are anticipated; therefore none are presented in this report:

- 300 Area Solvent Evaporator (Part V) [WHC];
- 2727-S Nonradioactive Dangerous Waste Storage Facility (Part V) [WHC];
- Simulated High Level Waste Slurry Treatment and Storage (Part V) [PNL];
- 216-B-3 Expansion Ponds (Part V) [WHC].



In addition to the Projection of Anticipated Costs discussed in the previous paragraph, five brief projections are included for the TSD units that have been incorporated into the RCRA Permit, DW Portion, during FY 1995 and which have only administrative costs left to accomplish closure. The five TSD units are:

- 218-E-8 Borrow Pit Demolition Site (Part V) [WHC];
- 200 West Area Ash Pit Demolition Site (Part V) [WHC];
- 2101-M Pond (Part V) [WHC];
- Hanford Patrol Academy Demolition Site (Part V) [WHC]; and
- 304 Concretion Facility (Part V) [WHC].

A full Projection of Anticipated Closure Costs has been prepared for the following TSD unit that is currently incorporated into the RCRA Permit, DW Portion. The Projection of Anticipated Closure Costs for this TSD unit has been completed using the methodology of the U.S. Department of Energy, Richland Operation Office's (RL) Implementing Directive (ID) 5700.3, "Project Cost Estimating, Analysis, and Cost Standardization:"

- 105-DR Large Sodium Fire Facility (Part V) [WHC].

A full Projection of Anticipated Closure Costs has also been prepared for the following TSD unit incorporated into Revision 0 of the RCRA Permit, DW Portion. This estimate was prepared in accordance with the Environment Restoration Contractor's Baselines and Funds Management System Procedure and used the Primavera scheduling system/Parade costing system:

- 183-H Solar Evaporation Basins (Part V) [BHI].

#### **Closure Activities:**

The Projections of Anticipated Closure Costs are developed using Hanford Facility expertise and costs, the assumption being that third party costs would be similar to that expended by the Hanford Site workforce. Projections of the Anticipated Closure Costs take into consideration, where appropriate, labor and equipment; contractors for offsite treatment and disposal of dangerous waste; TSD unit and equipment decontamination; equipment removal; sampling and analysis of concrete and soil; and oversight of all closure activities by an independent registered professional engineer. These projections do not include costs that have already been incurred; costs are projected from October 1, 1995, forward.

Projections of Anticipated Closure Costs assume that workers have received hazardous waste site worker training in dangerous waste cleanup in compliance with Occupational Safety and Health Administration Standards [29 CFR Part 1910.120(e)] and/or job-specific training for a particular task. Further, it is assumed that outside consultants (i.e., Professional Engineers) will possess the demonstrated experience in closure of TSD units and cleanup of dangerous waste sites.

**Cost Basis:**

Projections of Anticipated Closure Costs were developed, wherever possible, using actual operations, closure, and experience on the Hanford Site. These costs were obtained from personal interviews, memorandums, and financial planning records. Other sources used include the R.S. Means Estimating Guide 1995 and the Kaiser Financial Information of Craft Labor Rates. No costs for salvage value of equipment nor non-dangerous or dangerous wastes have been incorporated into these projections.

**Inventory Elimination Costs:**

Projections of Anticipated Closure Costs for treating, transporting, and offsite disposal of remaining inventory, after waste is no longer accepted at the TSD unit, are based on the maximum waste inventory for that specific TSD unit.

**Updating of Projections of Anticipated Closure Costs:**

Projections of Anticipated Closure Costs are based on 1995 costs and the latest revision of the closure plans; updated versions of these and future projections will be adjusted for inflation annually. Projections of Anticipated Closure Costs also will be updated if a change to the closure plan increases the cost of closing the unit. These projections will be updated on an annual basis, to reflect the current status of the TSD unit in terms of closure plan documentation or actual closure activities.

## 616 NONRADIOACTIVE DANGEROUS WASTE STORAGE FACILITY

The closure strategy/approach has not changed for this TSD unit. The costs for this TSD unit are adjusted by an inflation factor of 3.4 percent for FY 1995 from the estimate submitted in 1994. This factor would not take into account changes in specific cost elements included in the October 31, 1994, estimate. This TSD unit is not scheduled for closure within the next five years. Complete updated estimates will be included in future reports if the closure strategy/approach should significantly change, or if a closure date is established.

### 305-B STORAGE FACILITY

The closure strategy/approach has not changed for this TSD unit. The costs for this TSD unit are adjusted by an inflation factor of 3.4 percent for FY 1995 from the estimate submitted in 1994. This factor would not take into account changes in specific cost elements included in the October 31, 1994, estimate. This TSD unit is not scheduled for closure within the next five years. Complete updated estimates will be included in future reports if the closure strategy/approach should significantly change or if a closure date is established.

### 183-H SOLAR EVAPORATION BASINS

1. This Projection of Anticipated Closure Costs was developed using the 183-H Solar Evaporation Basins, Chapter 1, Part V, "Dangerous Waste Portion, Hanford Facility RCRA Permit," Revision 2, August 1995.
2. The Primavera scheduling/Parade costing system was used in creating this cost projection. Unit cost data relied upon expert opinion, R.S. Means Estimating Guide 1995 (Means is a registered trademark), Sitewide Historical Cost Data, and onsite disposal costs.
3. Costs and schedules are shown in the following integrated cost account plan. The plan consists of three parts: closure schedule, direct labor hours, and burdened budget costs (which include waste disposal costs).

ADS#: 3020  
 HQ/ERC WBS#: 1.4.10.1.2.02  
 TITLE: RCRA Closures

## Subproject Cost Account Plans

September 26, 1995

### INTEGRATED COST ACCOUNT PLAN

ADS: 3020 Cost Account Plan *** FY96 Only ***		1PV5201: 183 H CLEAN UP/SAMPLING											Report Date: 28SEP95	
Work Pkg	Work Package Description	OCT95	NOV95	DEC95	JAN96	FEB96	MAR96	APR96	MAY96	JUN96	JUL96	AUG96	SEP96	Totals
Schedule:														
1PV520103 183-H CONCRETE REMEDIATION														
1PV520104 183-H SOIL REMEDIATION														
1PV520105 183-H PROJECT MANAGEMENT														
Direct Labor:														
1PV520103 183-H CONCRETE REMEDIATION		999.0	651.0	0.0	696.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2346.0
1PV520104 183-H SOIL REMEDIATION		0.0	0.0	0.0	78.0	738.0	1160.0	0.0	0.0	0.0	185.0	115.0	0.0	2276.0
1PV520105 183-H PROJECT MANAGEMENT		685.0	912.0	820.0	1005.0	882.0	848.0	430.0	431.0	521.0	517.0	258.0	187.0	7496.0
Total Direct Labor (M/H)		1684.0	1563.0	820.0	1779.0	1620.0	2008.0	430.0	431.0	521.0	702.0	373.0	187.0	12118.0
Cumulative Direct Labor		1684.0	3247.0	4067.0	5846.0	7466.0	9474.0	9904.0	10335.0	10856.0	11558.0	11931.0	12118.0	12118.0
FTEs		15.6	10.9	6.3	11.2	11.2	11.6	3.0	3.0	3.0	5.4	2.1	1.0	6.7
Cumulative FTEs		15.6	12.9	10.6	10.8	10.9	11.0	9.9	9.0	8.2	8.0	7.3	6.7	6.7
Burdened Budgeted Costs (BCWS):														
1PV520103 183-H CONCRETE REMEDIATION		78.0	46.1	0.0	52.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	176.9
1PV520104 183-H SOIL REMEDIATION		0.0	0.0	0.0	23.8	98.9	149.8	14.2	0.0	0.0	133.7	82.3	0.0	502.7
1PV520105 183-H PROJECT MANAGEMENT		41.8	55.8	50.2	61.4	54.2	53.7	29.8	29.8	36.0	33.7	16.9	12.9	476.2
Total Burdened Budgeted Costs (BCWS)		119.8	101.9	50.2	138.0	153.1	203.5	44.0	29.8	36.0	167.4	99.2	12.9	1155.8
Cumulative Budgeted Costs (BCWS)		119.8	221.7	271.9	409.9	563.0	766.5	810.5	840.3	876.3	1043.7	1142.9	1155.8	1155.8

ALL COSTS IN \$1000

## 218-E-8 BORROW PIT DEMOLITION SITE

The only remaining costs associated with closure for this TSD unit are administrative costs, supporting the submittal of the revised Part A Form for the unit. The estimated remaining closure cost is approximately \$300.00.

## 200 WEST AREA ASH PIT DEMOLITION SITE

The only remaining costs associated with closure for this TSD unit are administrative costs, supporting the submittal of the revised Part A Form for the unit. The estimated remaining closure cost is approximately \$300.00.



#### 2101-M POND

The only remaining costs associated with closure for this TSD unit are administrative costs, supporting the submittal of the revised Part A Form for the unit. The estimated remaining closure cost is approximately \$300.00.

### **HANFORD PATROL ACADEMY DEMOLITION SITE**

The only remaining costs associated with closure for this TSD unit are administrative costs, supporting the submittal of the revised Part A Form for the unit. The estimated remaining closure cost is approximately \$300.00.

### 304 CONCRETION FACILITY

The only remaining costs associated with closure for this TSD unit are administrative costs, supporting the submittal of the closure certifications and the revised Part A Form for the unit. The estimated remaining closure cost is approximately \$600.00.

### 300 AREA SOLVENT EVAPORATOR

This TSD unit was clean closed during FY 1995. There are no anticipated costs remaining for closure.

**2727-S NONRADIOACTIVE DANGEROUS WASTE STORAGE FACILITY**

This TSD unit was clean closed during FY 1995. There are no anticipated costs remaining for closure.

## **SIMULATED HIGH LEVEL WASTE SLURRY TREATMENT AND STORAGE**

This TSD unit was clean closed during FY 1995. There are no anticipated costs remaining for closure.

### 216-B-3 EXPANSION PONDS

This TSD unit was clean closed during FY 1995. There are no anticipated costs remaining for closure.

## 105-DR LARGE SODIUM FIRE FACILITY

1. This Projection of Anticipated Closure Costs were developed using the 105-DR Large Sodium Fire Facility, Chapter 10, Part V, "Dangerous Waste Portion, Hanford Facility RCRA Permit," Revision 2, August 1995.
2. The U.S. Department of Energy, Richland Operations Office (RL) Implementing Directive (ID) 5700.3 "Project Cost Estimating, Analysis, and Cost Standardization," April 1994, and Environmental Restoration and Waste Management Cost Assessment Team (EM-CAT) September 1990, were used in creating this cost projection for format and consistency. Unit cost data relied upon expert opinion, R.S. Means Estimating Guide 1995 (Means is a registered trademark), Kaiser Financial Information of Craft Labor Rates, Sitewide Historical Cost Data, and offsite disposal costs.
3. This projection consists of essentially eight parts:

Part 1. - The cover page, which gives the total rounded dollars for the projection. This is referred to as DOE\_R01, or "01" report;

Parts 2 - 7. - The summary of all activities performed to achieve closure. These summaries are referred to as the DOE\_R02-R07, or the "02, 03...07" reports; and

Part 3. - A detailed cost breakdown for each individual activity, is referred to as the DOE\_R08, or the "08" report.
4. The "02" report, for example, consists of seven subtotal columns:

Column 1. - Projection Subtotal. The cost for completion of an activity in current dollars;

Column 2. - Other Indirects. Any additional indirect charges that may apply;

Column 3. - Subtotal. The subtotal of columns 1 and 2. It is the total cost of the activity in current dollars;

Column 4. - Escalation. Escalation is applied according to the duration of activities that continue into future years;

Column 5. - Subtotal. Subtotal of columns 1 through 4;

Column 6. - Contingency. Contingency is assigned according to the type and confidence level of the activity; and

Column 7. - Total Dollars. Totals of Columns 1 through 6. Total activity cost or total future cost if escalation is applied.



KAISER ENGINEERS HANFORD  
WESTINGHOUSE  
JOB NO. Z264SBA1/F75XL5  
FILE NO. Z264SBA1

\*\* TEST - INTERACTIVE ESTIMATING \*\*  
105-DR LARGE SODIUM FIRE FACILITY CLOSURE

PAGE 1 OF 7  
DATE 09/15/95 15:50:59  
BY R.W. OHRT

DOE\_R01 - PROJECT COST SUMMARY

COST CODE =====	DESCRIPTION =====	ESCALATED TOTAL COST =====	CONTINGENCY % =====	TOTAL TOTAL =====	TOTAL DOLLARS =====
000	ENGINEERING	145,000	20	29,000	174,000
460	IMPROVEMENTS TO LAND	207,000	20	41,000	248,000
	(ADJUSTED TO MEET DOE 5100.4)	<2,000>			<2,000>
=====					
PROJECT TOTAL		350,000	20	70,000	420,000

TYPE OF  
ESTIMATE STUDY ESTIMATE SEPTEMBER 15, 1995

ARCHITECT  
ENGINEER

OPERATING  
CONTRACTOR

REMARKS:

(ROUNDED/ADJUSTED TO THE NEAREST " 1,000 / 10,000 " - PERCENTAGES NOT RECALCULATED TO REFLECT ROUNDING)

KAISER ENGINEERS HANFORD  
 WESTINGHOUSE  
 JOB NO. 2264SBA1/F75XL5  
 FILE NO. 2264SBA1

\*\* TEST - INTERACTIVE ESTIMATING \*\*  
 105-DR LARGE SODIUM FIRE FACILITY CLOSURE  
 DOE\_R02 - WORK BREAKDOWN STRUCTURE SUMMARY

PAGE 2 OF 7  
 DATE 09/15/95 15:51:06  
 BY R.W. OHRT

WBS	DESCRIPTION	ESTIMATE SUBTOTAL	ONSITE INDIRECTS	SUB TOTAL	ESCALATION % TOTAL	SUB TOTAL	CONTINGENCY % TOTAL	TOTAL DOLLARS		
112000	CLOSURE PLAN REGULATORY REVIEW	100130	0	100130	0.00	0	100130	20	20026	120156
115000	SAMPLE DATA INTERPRETATION	5440	0	5440	0.00	0	5440	20	1088	6528
116000	CLOSURE PLAN CERTIFICATION	12000	0	12000	0.00	0	12000	20	2400	14400
SUBTOTAL 11	ENGINEERING	117570	0	117570	0.00	0	117570	20	23514	141084
123000	SAMPLING ANALYSIS	27550	0	27550	0.00	0	27550	20	5510	33060
SUBTOTAL 12	SAMPLING	27550	0	27550	0.00	0	27550	20	5510	33060
SUBTOTAL 1	ASSESSMENT	145120	0	145120	0.00	0	145120	20	29024	174144
221000	DECONTAMINATION / CLEANUP	206883	0	206883	0.00	0	206883	20	41377	248260
SUBTOTAL 2	CLEANUP	206883	0	206883	0.00	0	206883	20	41377	248260
-----										
PROJECT TOTAL		352,003	0	352,003	0.00	0	352,003	20	70,401	422,404

KAISER ENGINEERS HANFORD  
WESTINGHOUSE  
JOB NO. Z264SBA1/F75XL5  
FILE NO. Z264SBA1

\*\* TEST - INTERACTIVE ESTIMATING \*\*  
105-DR LARGE SODIUM FIRE FACILITY CLOSURE  
DOE\_R03 - ESTIMATE BASIS SHEET

PAGE 3 OF 7  
DATE 09/15/95 13:24:07  
BY R.W. OHRT

1. DOCUMENTS AND DRAWINGS

=====

DOCUMENTS: NONE

DRAWINGS: NONE

2. MATERIAL PRICES

=====

UNIT COSTS REPRESENT CURRENT PRICES FOR SPECIFIED MATERIAL. VENDOR INFORMATION WAS OBTAINED FOR THE FOLLOWING ITEMS:

3. LABOR RATES

=====

A.) WHC HOURLY RATES ARE BASED UPON THE FY 1995 PLANNING RATES \* (REPORT BGHB2001).

B.) IRM HOURLY RATES ARE BASED UPON THE FY 1995 PLANNING RATES \* (REPORT BGHB7008).

C.) BASE CRAFT RATES ARE AS ISSUED BY KEH FINANCE (EFFECTIVE 10-01-94). RATES INCLUDE FRINGE BENEFITS, LABOR INSURANCE, TAXES AND TRAVEL WHERE APPLICABLE, PER HANFORD SITE STABILIZATION AGREEMENT, APPENDIX A (EFFECTIVE 09-06-94).

\* SEE HANFORD SOFT REPORTING, FDS BUDGET GUIDELINE HANDBOOK, SECTION 2 - COMPANY INFORMATION, FY 1995 PLANNING RATES.

4. GENERAL REQUIREMENTS/TECHNICAL SERVICES/OVERHEADS

=====

(WHC FUNDED CAPITAL)

A.) ONSITE CONSTRUCTION FORCES GENERAL REQUIREMENTS, TECHNICAL SERVICES AND CRAFT OVERHEAD COSTS ARE INCLUDED AS A COMPOSITE PERCENTAGE BASED ON THE ICF-KH ESTIMATING FACTOR, REVISION 1, FY95, DATED 1/18/94 THE TOTAL COMPOSITE PERCENTAGE APPLIED TO ONSITE CONSTRUCTION FORCES LABOR, FOR THIS PROJECT, IS 71% FOR SHOP WORK AND 111% FOR FIELD WORK, WHICH IS REFLECTED IN THE "OH&P/B&I" COLUMN OF THE ESTIMATE DETAIL.

5. ESCALATION

=====

ALL COSTS ARE IN 1995 DOLLARS, NO ESCALATION HAS BEEN APPLIED.

6. ROUNDING

=====

U.S. DEPARTMENT OF ENERGY - DOE ORDER 5100.4 PAGE 1-32 SUBPARAGRAPH (M), REQUIRES ROUNDING OF ALL GENERAL PLANT PROJECTS (GPP'S) AND LINE ITEM (LI) COST ESTIMATES. REFERENCE: DOE 5100.4, FIGURE 1-11, DATED 10-31-84.

7. REMARKS

=====

A.) ALL COSTS ARE SHOWN IN 1995 DOLLARS.

B.) ESTIMATE ASSUMES THERE IS NO ELEMENTAL SODIUM IN EXISTING PIPELINES.

C.) WASTE DISPOSAL COSTS ARE BASED ON SOLID WASTE PROGRAMS FY96 PROJECTIONS PER INTERNAL MEMO 87310-94-002 DATED JAN 13, 1994.

KAISER ENGINEERS HANFORD  
WESTINGHOUSE  
JOB NO. Z264SBA1/F75XL5  
FILE NO. Z264SBA1

\*\* TEST - INTERACTIVE ESTIMATING \*\*  
105-DR LARGE SODIUM FIRE FACILITY CLOSURE  
DOE\_R04 - COST CODE ACCOUNT SUMMARY

PAGE 4 OF 7  
DATE 09/15/95 15:51:12  
BY R.W. OHRT

COST CODE/WBS	DESCRIPTION	ESTIMATE SUBTOTAL	ONSITE INDIRECTS	SUB TOTAL	ESCALATION % TOTAL	SUB TOTAL	CONTINGENCY % TOTAL	TOTAL DOLLARS
=====								
000	ENGINEERING							
112000	CLOSURE PLAN REGULATORY REVIEW	100130	0	100130	0.00	0	100130 20	120156
115000	SAMPLE DATA INTERPRETATION	5440	0	5440	0.00	0	5440 20 1088	6528
116000	CLOSURE PLAN CERTIFICATION	12000	0	12000	0.00	0	12000 20 2400	14400
123000	SAMPLING ANALYSIS	27550	0	27550	0.00	0	27550 20 5510	33060
TOTAL 000	ENGINEERING	145120	0	145120	0.00	0	145120 20 29024	174144
460	IMPROVEMENTS TO LAND							
221000	DECONTAMINATION / CLEANUP	206883	0	206883	0.00	0	206883 20 41377	248260
TOTAL 460	IMPROVEMENTS TO LAND	206883	0	206883	0.00	0	206883 20 41377	248260
=====								
PROJECT TOTAL		352,003	0	352,003	0.00	0	352,003 20 70,401	422,404

KAISER ENGINEERS HANFORD  
WESTINGHOUSE  
JOB NO. Z264SBA1/F75XL5  
FILE NO. Z264SBA1

\*\* IEST - INTERACTIVE ESTIMATING \*\*  
105-DR LARGE SODIUM FIRE FACILITY CLOSURE  
DOE\_R05 - ESTIMATE SUMMARY BY CSI DIVISION

PAGE 5 OF 7  
DATE 09/15/95 15:51:15  
BY R.W. OHRT

CSI	DESCRIPTION	ESTIMATE SUBTOTAL	ONSITE INDIRECTS	SUB TOTAL	ESCALATION % TOTAL	SUB TOTAL	CONTINGENCY % TOTAL	TOTAL DOLLARS
=====								
ENGINEERING								
00	TECHNICAL SERVICES	145120	0	145120	0.00	0	20	174144
	TOTAL ENGINEERING	145,120	0	145,120	0.00	0	20	174,144
CONSTRUCTION								
01	GENERAL REQUIRMENTS	31795	0	31795	0.00	0	20	38154
02	SITEWORK	175088	0	175088	0.00	0	20	210106
	TOTAL CONSTRUCTION	206,883	0	206,883	0.00	0	20	248,260
=====								
PROJECT TOTAL		352,003	0	352,003	0.00	0	20	422,404

KAISER ENGINEERS HANFORD  
WESTINGHOUSE  
JOB NO. 2264SBA1/F75XL5  
FILE NO. 2264SBA1

\*\* IEST - INTERACTIVE ESTIMATING \*\*  
105-DR LARGE SODIUM FIRE FACILITY CLOSURE  
DOE\_R06 - CONTINGENCY ANALYSIS BASIS SHEET

PAGE 6 OF 7  
DATE 09/15/95 13:24:15  
BY R.W. OHRT

REFERENCE: ESTIMATE BASIS SHEET  
COST CODE ACCOUNT SUMMARY

PAGE 3 OF 7  
PAGE 4 OF 7

THE U.S. DEPARTMENT OF ENERGY - RICHLAND ORDER 5700.3 "COST ESTIMATING, ANALYSIS AND STANDARDIZATION" DATED 3-27-85, PROVIDES GUIDELINES FOR ESTIMATE CONTINGENCIES. THE GUIDELINE FOR A STUDY ESTIMATE SHOULD HAVE AN OVERALL RANGE OF 20 TO 50%.

CONTINGENCY IS EVALUATED AT THE THIRD COST CODE LEVEL AND SUMMARIZED AT THE PRIMARY AND SECONDARY COST CODE LEVEL OF THE DETAILED COST ESTIMATE.

ENGINEERING: A 20% CONTINGENCY WAS APPLIED BECAUSE OF POSSIBLE GROWTH IN THIS AREA.

SAMPLING: A 20% CONTINGENCY WAS APPLIED FOR SAMPLING TO ALLOW FOR ANY QUANTITY INCREASE.

CLEANUP: A 20% CONTINGENCY WAS ALLOWED DUE TO THE FACT THAT THE EXTENT WILL BE UNKNOWN UNTIL THE SAMPLING IS DONE.

OVERALL IT WAS FELT THAT ENOUGH HAS ALREADY BEEN DONE AND ENOUGH IS KNOWN ABOUT THE WORK YET TO BE PERFORMED THAT A MINIMAL CONTINGENCY WILL BE SUFFICIENT.

AVERAGE OVERALL CONTINGENCY 20%

KAISER ENGINEERS HANFORD  
WESTINGHOUSE  
JOB NO. Z264SBA1/F75XL5  
FILE NO. Z264SBA1

\*\* TEST - INTERACTIVE ESTIMATING \*\*  
105-DR LARGE SODIUM FIRE FACILITY CLOSURE  
DOE\_R07 - ONSITE INDIRECT COSTS BY WBS

PAGE 7 OF 7  
DATE 09/15/95 15:51:20  
BY R.W. OHRT

WBS	DESCRIPTION	ESTIMATE SUBTOTAL	CONTRACT %	ADMINISTRATION TOTAL	BID PACK PREP.	OTHER INDIRECTS	TOTAL INDIRECTS
=====	=====	=====	=====	=====	=====	=====	=====
112000	CLOSURE PLAN REGULATORY REVIEW	100130	0.00	0	0	0	0
115000	SAMPLE DATA INTERPRETATION	5440	0.00	0	0	0	0
116000	CLOSURE PLAN CERTIFICATION	12000	0.00	0	0	0	0
123000	SAMPLING ANALYSIS	27550	0.00	0	0	0	0
221000	DECONTAMINATION / CLEANUP	206883	0.00	0	0	0	0
=====							
PROJECT TOTAL		352,003		0	0	0	0

KAISER ENGINEERS HANFORD  
WESTINGHOUSE  
JOB NO. 2264SBA1/F75XL5

\*\* TEST - INTERACTIVE ESTIMATING \*\*  
105-DR LARGE SODIUM FIRE FACILITY CLOSURE

PAGE 1  
DATE 09/15/95 15:51:23  
BY R.W. OHRT

DOE\_R08 - ESTIMATE DETAIL BY WBS / COST CODE

ACCOUNT NUMBER	DESCRIPTION	COST CODE	QUANTITY	MANHOURS	LABOR	EQUIP USAGE	MATERIAL	SUB- CONTRACT	EQUIP- MENT	OH&P / B & I	TOTAL DOLLARS
112000	CLOSURE PLAN REGULATORY REVIEW										
112000.00	TECHNICAL SERVICES										
112000.0040059	***** CLOSURE PLAN MONITORING ***** **FY96**	000	0	0	0	0	0	0	0	0	0
112000.0040061	RCRA CLOSURES (EXEMPT) .7 FTE FOR 12 MO.	000	1 L/S	1285	80955	0	0	0	0	0	80955
112000.0040062	RCRA CLOSURES (NON-EX) .2 FTE FOR 12 MO.	000	1 L/S	367	9175	0	0	0	0	0	9175
112000.0050000	***** OTHER COSTS *****	000	0	0	0	0	0	0	0	0	0
112000.0050040	**FY96** OFFICE SUPPLIES: \$5,000 TRAVEL: \$5,000	000	1 L/S	0	0	0	0	10000	0	0	10000
SUBTOTAL TECHNICAL SERVICES				1,652	90,130	0	0	10,000	0	0	100,130
TOTAL COST CODE 00000 WBS 112000 (ESCALATION 0.00% - CONTINGENCY 20.00 %)				1,652	90,130	0	0	10,000	0	0	100,130
TOTAL WBS 112000 CLOSURE PLAN REGULATORY REVIEW				1,652	90,130	0	0	10,000	0	0	100,130



KAISER ENGINEERS HANFORD  
WESTINGHOUSE  
JOB NO: 2264SBA1/F75XL5

\*\* IEST - INTERACTIVE ESTIMATING \*\*  
105-DR LARGE SODIUM FIRE FACILITY CLOSURE

PAGE 2  
DATE 09/15/95 15:51:23  
BY R.W. OHRT

DOE\_R08 - ESTIMATE DETAIL BY WBS / COST CODE

ACCOUNT NUMBER	DESCRIPTION	COST CODE	QUANTITY	MANHOURS	LABOR	EQUIP USAGE	MATERIAL	SUB- CONTRACT	EQUIP- MENT	OH&P / B & I	TOTAL DOLLARS
115000	SAMPLE DATA INTERPRETATION										
115000.00	TECHNICAL SERVICES										
115000.0010000	***** SAMPLE DATA INTERPRETATION *****	000	0	0	0	0	0	0	0	0	0
115000.0010010	VERIFICATION:	000	0	0	0	0	0	0	0	0	0
115000.0010011	200/300 REMEDIAL INVEST- IGATION, EXEMPT, .5 FTE FOR 1 MO.	000	1 L/S	80	5040	0	0	0	0	0	5040
115000.0010012	200/300 REMEDIAL INVEST- IGATION, NON-EXEMPT. .1 FTE FOR 1 MO.	000	1 L/S	16	400	0	0	0	0	0	400
SUBTOTAL	TECHNICAL SERVICES			96		0	0	0	0	0	
					5,440		0		0		5,440
TOTAL	COST CODE 00000 WBS 115000 (ESCALATION 0.00% - CONTINGENCY 20.00 %)			96		0	0	0	0	0	
					5,440		0		0		5,440
TOTAL WBS 115000	SAMPLE DATA INTERPRETATION			96		0	0	0	0	0	
					5,440		0		0		5,440

KAISER ENGINEERS HANFORD  
WESTINGHOUSE  
JOB NO. 2264SBA1/F75XL5

\*\* TEST - INTERACTIVE ESTIMATING \*\*  
105-DR LARGE SODIUM FIRE FACILITY CLOSURE  
DOE\_R08 - ESTIMATE DETAIL BY WBS / COST CODE

PAGE 3  
DATE 09/15/95 15:51:23  
BY R.W. OHRT

ACCOUNT NUMBER	DESCRIPTION	COST CODE	QUANTITY	MANHOURS	LABOR	EQUIP USAGE	MATERIAL	SUB- CONTRACT	EQUIP- MENT	OH&P / B & I	TOTAL DOLLARS
=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====
116000	CLOSURE PLAN CERTIFICATION										
116000.00	TECHNICAL SERVICES										
116000.0010000	***** CLOSURE PLAN CERTIFICATION *****	000	0	0	0	0	0	0	0	0	0
116000.0010001	REVIEW OF CLOSURE PLAN AND SIGNING OF CERTIFICATION BY AN INDEPENDENT P.E. (PART TIME FOR 1 YEAR) BASED ON PARTIAL CLEAN CLOSURE.	000	1 L/S	0	0	0	0	12000	0	0	12000
SUBTOTAL	TECHNICAL SERVICES			0	0	0	0	12,000	0	0	12,000
TOTAL	COST CODE 00000 WBS 116000 (ESCALATION 0.00% - CONTINGENCY 20.00 %)			0	0	0	0	12,000	0	0	12,000
TOTAL WBS 116000	CLOSURE PLAN CERTIFICATION			0	0	0	0	12,000	0	0	12,000

KAISER ENGINEERS HANFORD  
WESTINGHOUSE  
JOB NO. Z264SBA1/F75XL5

\*\* TEST - INTERACTIVE ESTIMATING \*\*  
105-DR LARGE SODIUM FIRE FACILITY CLOSURE

PAGE 4  
DATE 09/15/95 15:51:23  
BY R.W. OHRT

DOE\_R08 - ESTIMATE DETAIL BY WBS / COST CODE

ACCOUNT NUMBER	DESCRIPTION	COST CODE	QUANTITY	MANHOURS	LABOR	EQUIP USAGE	MATERIAL	SUB- CONTRACT	EQUIP- MENT	OH&P / B & I	TOTAL DOLLARS
123000	SAMPLING ANALYSIS										
123000.00	TECHNICAL SERVICES										
123000.0010000	***** SAMPLING ANALYSIS *****	000	0	0	0	0	0	0	0	0	0
123000.0010002	SAMPLING ANALYSIS TO SUPPORT VERIFICATION SAMPLING. (FULL CLP)	000	5 EA	0	0	0	0	12500	0	0	12500
123000.0010010	LABORATORY ANALYSIS (QA/QC)	000	5 EA	0	0	0	0	10000	0	0	10000
123000.0010020	FOLLOW UP	000	1 L/S	0	0	0	0	250	0	0	250
123000.0010050	SAMPLING ANALYSIS - LARGE FIREROOM DRUM WASTE.	000	10 EA	0	0	0	0	3000	0	0	3000
123000.0010060	SAMPLING ANALYSIS - SODIUM FEED ROOM DRUM WASTE.	000	2 EA	0	0	0	0	600	0	0	600
123000.0010070	SAMPLING ANALYSIS - EXHAUST FAN ROOM.	000	4 EA	0	0	0	0	1200	0	0	1200
SUBTOTAL	TECHNICAL SERVICES			0	0	0	0	27,550	0	0	27,550
TOTAL	COST CODE 00000 WBS 123000 (ESCALATION 0.00% - CONTINGENCY 20.00 %)			0	0	0	0	27,550	0	0	27,550
TOTAL WBS 123000	SAMPLING ANALYSIS			0	0	0	0	27,550	0	0	27,550

KAISER ENGINEERS HANFORD  
WESTINGHOUSE  
JOB NO. 2264SBA1/F75XL5

\*\* TEST - INTERACTIVE ESTIMATING \*\*  
105-DR LARGE SODIUM FIRE FACILITY CLOSURE

PAGE 5  
DATE 09/15/95 15:51:23  
BY R.W. OHRT

DOE\_R08 - ESTIMATE DETAIL BY WBS / COST CODE

ACCOUNT NUMBER	DESCRIPTION	COST CODE	QUANTITY	MANHOURS	LABOR	EQUIP USAGE	MATERIAL	SUB- CONTRACT	EQUIP- MENT	OH&P / B & I	TOTAL DOLLARS
221000	DECONTAMINATION / CLEANUP										
221000.01	GENERAL REQUIRMENTS										
221000.0100000	***** RADIATION SURVEY *****	460	0	0	0	0	0	0	0	0	0
221000.0100002	TWO HPT'S FOR JOB DURATION.	460	1 L/S	736	31795	0	0	0	0	0	31795
SUBTOTAL	GENERAL REQUIRMENTS			736		0	0	0	0	0	
					31,795		0		0		31,795
TOTAL	COST CODE 46001 WBS 221000 (ESCALATION 0.00% - CONTINGENCY 20.00 %)			736		0	0	0	0	0	
					31,795		0		0		31,795
221000.02	SITWORK										
221000.0200000	***** DECONTAMINATION / CLEANUP *****	460	0	0	0	0	0	0	0	0	0
221000.0200002	***AREA 1*** * * * * * EXHAUST FAN ROOM * * * * *	460	0	0	0	0	0	0	0	0	0
221000.0200003	VACUUM AND PRESSURE BLAST WALLS, FLOOR AND EQUIPMENT, SET UP & TEAR DOWN SCAFFOLD, REMOVE ELECTRICAL WIRING, PUT RINSATE INTO DRUMS.	460	0	0	0	0	0	0	0	0	0
221000.0200004	ALLOW 5 MAN CREW 18 DAYS.	460	1 L/S	720	19440	600	200	0	0	21578	41818
221000.0200016	DRUM COSTS, 20 EA @ \$65.	460	20 EA	0	0	0	1300	0	0	0	1300
221000.0200020	WASTE DISPOSAL COSTS FOR 20 DRUMS OF HAZ WASTE.	460	20 EA	10	300	80	0	11260	0	333	11973
221000.0210000	***AREA 3*** * * * * *	460	0	0	0	0	0	0	0	0	0
221000.0210002	GRAVEL SCRUBBER * * * * * REMOVE GRAVEL FROM SCRUBBER, ASSUME VOLUME TO BE 10'X 12' X 3'D OR 360 CF. PUT INTO DRUMS. (ALLOWANCE)	460	1 L/S	96	2592	2000	0	0	0	2877	7469

KAISER ENGINEERS HANFORD  
WESTINGHOUSE  
JOB NO. Z264SBA1/F75XL5

\*\* TEST - INTERACTIVE ESTIMATING \*\*  
105-DR LARGE SODIUM FIRE FACILITY CLOSURE

PAGE 6  
DATE 09/15/95 15:51:24  
BY R.W. OHRT

DOE\_R08 - ESTIMATE DETAIL BY WBS / COST CODE

ACCOUNT NUMBER	DESCRIPTION	COST CODE	QUANTITY	MANHOURS	LABOR	EQUIP USAGE	MATERIAL	SUB- CONTRACT	EQUIP- MENT	OH&P / B & I	TOTAL DOLLARS
221000.0210004	DRUM COST, 52 EA @ \$65.	460	52 EA	0	0	0	3380	0	0	0	3380
221000.0210006	DISPOSAL COSTS, 52 DRUMS @ \$563 EA.(IF HAZ)	460	52 EA	26	780	208	0	29276	0	866	31130
221000.0211000	* * * * * DUCT TO SCRUBBER * * * * *	460	0	0	0	0	0	0	0	0	0
221000.0211002	REMOVE DUCT, 6 MAN CREW WITH CRANE FOR ONE DAY.	460	1 L/S	48	1440	425	0	0	0	1598	3463
221000.0211004	FAB AND INSTALL 2 - 36" DIA BLANKS FOR BUILDING WALL AND SCRUBBER TO FILL HOLE LEFT BY DUCT REMOVAL.	460	1 L/S	48	1632	0	100	0	0	1812	3544
221000.0211006	PRESSURE BLAST THE INSIDE OF DUCT PIECES, ASSUME 50 FT OF 36" DIA DUCT. ALLOW FOR 5 MAN CREW 3 DAYS TO DISASSEMBLE DUCT PIECES, PROP FOR CLEANING, CONTAINERIZING THE RINSATE, LOADING DRUMS AND CLEANED DUCT FOR DISPOSAL.	460	1 L/S	120	3240	2500	100	0	0	3596	9436
221000.0211008	BLE DUCT PIECES, PROP FOR CLEANING, CONTAINERIZING THE RINSATE, LOADING DRUMS AND CLEANED DUCT FOR DISPOSAL.	460	0	0	0	0	0	0	0	0	0
221000.0211010	DRUM COSTS, 3 EA @ \$65.	460	3 EA	0	0	0	195	0	0	0	195
221000.0211012	DISPOSAL COST FOR 3 DRUMS OF RINSATE, ASSUME HAZ WASTE	460	3 EA	2	60	12	0	1689	0	67	1828
221000.0221000	* * * * * LARGE FIREROOM * * * * *	460	0	0	0	0	0	0	0	0	0
221000.0221002	CLEAN WALLS, VACUUM AND HIGH PRESSURE WASH, 5 MEN - 10 DAYS.	460	1 L/S	400	10800	0	0	0	0	11988	22788
221000.0221010	DRUM COSTS, 10 EA @ \$65.	460	10 EA	0	0	0	650	0	0	0	650
221000.0221012	DISPOSAL COSTS, 10 DRUMS OF OF RINSATE, ASSUMED HAZ.	460	10 EA	5	150	40	0	5630	0	167	5987
221000.0231000	* * * * * SODIUM FEED ROOM * * * * *	460	0	0	0	0	0	0	0	0	0
221000.0231002	VACUUM DUCT, CLEAN ROOM AND TANK, REMOVE DUCT, APPROX 20 FT. 5 MEN - 10 DAYS.	460	1 L/S	400	10800	0	0	0	0	11988	22788
221000.0231010	DRUM COST, 10 EA @ \$65	460	10 EA	0	0	0	650	0	0	0	650
221000.0231012	DISPOSAL COSTS FOR DRUMS OF WASTE, ASSUME BOTH CARBONATE	460	10 EA	5	150	40	0	4000	0	167	4357

KAISER ENGINEERS HANFORD  
WESTINGHOUSE  
JOB NO. 2264SBA1/F75XL5

\*\* TEST - INTERACTIVE ESTIMATING \*\*  
105-DR LARGE SODIUM FIRE FACILITY CLOSURE  
DOE\_R08 - ESTIMATE DETAIL BY WBS / COST CODE

PAGE 7  
DATE 09/15/95 15:51:24  
BY R.W. OHRT

ACCOUNT NUMBER	DESCRIPTION	COST CODE	QUANTITY	MANHOURS	LABOR	EQUIP USAGE	MATERIAL	SUB- CONTRACT	EQUIP- MENT	OH&P / B & I	TOTAL DOLLARS
	AND RINSATE, BOTH HAZ.										
SUBTOTAL	SITEWORK			1,880	51,384	5,905	6,575	51,855	0	57,037	172,756
	CONSUMABLES 6.00 %						394				394
	SALES TAX 7.80 %						543				543
	WAREHOUSING 20.00 %						1393				1393
TOTAL	COST CODE 46002			1,880	51,384	5,905	8,907	51,855	0	57,037	175,088
	WBS 221000										
	(ESCALATION 0.00% - CONTINGENCY 20.00 %)										
TOTAL WBS 221000	DECONTAMINATION / CLEANUP			2,616	83,179	5,905	8,907	51,855	0	57,037	206,883

KAISER ENGINEERS HANFORD  
WESTINGHOUSE  
JOB NO. 2264SBA1/F75XL5

\*\* IEST - INTERACTIVE ESTIMATING \*\*  
105-DR LARGE SODIUM FIRE FACILITY CLOSURE  
DOE\_R08 - ESTIMATE DETAIL BY WBS / COST CODE

PAGE 8  
DATE 09/15/95 15:51:24  
BY R.W. OHRT

ACCOUNT NUMBER	DESCRIPTION	COST CODE	QUANTITY	MANHOURS	LABOR	EQUIP USAGE	MATERIAL	SUB- CONTRACT	EQUIP- MENT	OH&P / B & I	TOTAL DOLLARS
=====											
REPORT TOTAL				4,364	178,749	5,905	8,907	101,405	0	57,037	352,003

**CERTIFICATION OF THE PROJECTIONS OF ANTICIPATED CLOSURE  
COSTS FOR TSD UNITS, IN ACCORDANCE WITH  
CONDITION I.F. OF THE RCRA PERMIT**



PROJECTIONS OF ANTICIPATED COSTS FOR CLOSURE AND/OR POSTCLOSURE  
FOR  
TREATMENT, STORAGE, AND/OR DISPOSAL UNITS INCLUDED IN THE HANFORD FACILITY  
RESOURCE CONSERVATION AND RECOVERY ACT PERMIT, DANGEROUS WASTE PORTION,  
REVISION 2

CERTIFICATION

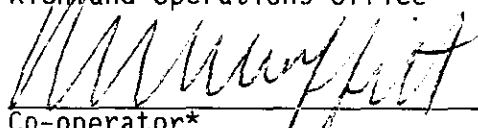
The following certification, required by WAC 173-303-810(13), is hereby included:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.



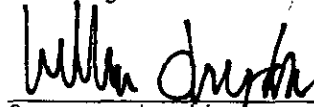
Owner/Operator  
John D. Wagoner, Manager  
U.S. Department of Energy  
Richland Operations Office

10/27/95  
Date



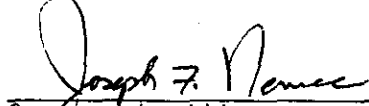
Co-operator\*  
A. LaMar Trego, President  
Westinghouse Hanford Company

10/19/95  
Date



Co-operator\*\*  
William J. Madia, Director  
Pacific Northwest Laboratory

24 Oct 95  
Date



Co-operator\*\*\*  
Joseph F. Nemec, President  
Bechtel Hanford, Inc.

10/25/95  
Date

- \* Westinghouse Hanford Company has responsibilities for the following treatment, storage, and/or disposal (TSD) units on the Hanford Facility and is signing for the information on these TSD units only: 616 Nonradioactive Dangerous Waste Storage Facility, 300 Area Solvent Evaporator, 2727-S Storage Facility, 218-E-8 Borrow Pit, 200 West Area Ash Pit, 2101-M Pond, 216-B-3 Expansion Ponds, Hanford Patrol Academy Demolition Site, 105-DR Large Sodium Fire Facility, and 304 Concretion Facility.
- \*\* Pacific Northwest Laboratory has responsibility for the following Hanford Facility TSD units and is signing for the information on these TSD units only: 305-B Storage Facility, and Simulated High Level Waste Slurry Treatment and Storage.
- \*\*\* Bechtel Hanford, Inc. has responsibility for the following Hanford Facility TSD unit and is signing for the information on this TSD unit only: 183-H Solar Evaporation Basins.